

REMARKS

The present application relates to hybrid maize plant and seed 33T17. Claims 1-32 are currently pending in the present application. Claims 1, 5 and 7 have been amended to insert deposit numbers. Claims 7, 11, 15, 19, 24, 28, and 32 have been rejected. Claims 1-6, 8-10, 12-14, 16-18, 20-23, 25-27, and 29-31 are objected to. Applicants respectfully request consideration of the following remarks.

Rejections Under 35 U.S.C. § 112, Second Paragraph

The Examiner notes that claim 1, 5, and 7 remain objected to as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” The Examiner objects to claims 1, 5, and 7, for the inclusion of a blank line where the ATCC accession number should be included. Applicants have amended the claims to recited the ATCC numbers. Applicant has also amended the specification deposit statement and the summary of the invention to now accurately reflect that deposit has been made..

Issues Under 35 U.S.C. § 102/103

Claim 7, remains rejected under 35U.S.C. 103(a) over Cunningham (US Patent 6, 087, 564). The Examiner notes that replacing the phrase “capable of expressing” with the phrase “expressing” would obviate the rejection. Applicant respectfully requests reconsideration. It is the unique combination of underlying alleles and genetic material that make up the novel maize plant of the invention. These alleles and this genetic material are present whether or not they are actually expressed. It is for this reason that applicant submits that the claim language “capable of expressing” is more appropriate. Reconsideration is requested.

Claims 11, 15, 19, 24, 28, 32, and amended claim 7 remain rejected under 35U.S.C. 102(b) as anticipated by or, in the alternative, as obvious under 35 U.S.C . 103(a) over Cunningham.. The claims recite a specific reference variety and a specific statistical test which may be performed to determine whether in fact the traits observed are actually the “same” as those listed in the claim. Further any phenotypic trait that is expressed in the claimed plants is a result of a combination of all of the genetic material present in the 33T17 plant, and 33T17 will

have its own unique genetic profile that it will contribute to a breeding program. This unique genetic background will result in the claimed plant and this profile and its combination with other plants will result in a unique combined genetic profile that is the product claimed.

The Examiner notes that the maize plant from Cunningham differs from the claimed plant only in its derivation from 33T17. The Examiner concludes that the process of making the claimed plants does not distinguish the plants themselves from those taught by the reference.

A plant with the combination of two of these traits is not rendered anticipated or obvious from Cunningham. It would require undue experimentation to begin with the hybrid of Cunningham which has its own unique combination of traits to breed with it to recover a hybrid with at least two of the traits enumerated in claims 11, 15, 19, 24, 28, 32 and amended claim 7. Further, there is no expectation of success that the crossing of the hybrid of Cunningham with some yet to be identified plant would yield a plant with two of the traits enumerated in the claim. Each generation would bring a random combination of traits and there is no expectation that the claimed combination could be achieved at all. Without any teaching about dominance, or heritability of such traits it cannot be said that there is an expectation of success that the combination of plants would achieve the combination enumerated in the claim, to say nothing of issues such as inbreeding depression etc. The laborious process of breeding to generate a hybrid is disclosed in the specification and to assume that another hybrid can be bred to generate the same grouping of traits is speculation at best.

It is submitted that an invention cannot be obvious if it requires unknown and unobvious material. The present invention involves a previously unknown and unobvious hybrid maize plant. One of ordinary skill in the art could not have conceived of using this specific material in breeding since it never before existed. It must be recognized that the plants provided by this breeding with this plant are themselves unusual and an unobvious result of a common process. In addition to these traits, each derived plant has additional benefits unique to each specific cross using 33T17 as one of the parents, which result exclusively from the use of applicant's novel starting material. Thus, the descendant plants deserve to be considered as new and unobvious compositions in their own right as products of the process of hybridization when 33T17 is used as a starting material.

Further, applicant notes that it is impermissible to use hindsight reconstruction and the benefit of applicants disclosure to cherry pick among pieces which are present in the art, there must be some suggestion or incentive to make the combination and an expectation of success. In re Vaeck 20 U.S.P.Q.2d 1434 (Fed. Cir. 1991).

Conclusion

Applicants submit that, in light of the foregoing amendments and remarks, the claims, as amended and as newly presented herein, are in condition for allowance. Reconsideration and early notice of allowability are respectfully requested.

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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Application No. 09/489,884

**AMENDMENT — VERSION WITH MARKINGS
TO SHOW CHANGES MADE**

In the Specification

Please replace the first paragraph under the summary of the invention at page 7 with the following:

[According to the invention, there is provided a hybrid maize plant, designated as 33T17, produced by crossing two Pioneer Hi-Bred International, Inc. proprietary inbred maize lines GE515488 and GE534625. These lines, deposited with the American Type Culture Collection, (ATCC), Manassas, Virginia 20110, have accession number _____ for GE515488 and accession number _____ for GE534625. This invention thus relates to the hybrid seed 33T17, the hybrid plant produced from the seed, and variants, mutants and trivial modifications of hybrid 33T17. This invention also relates to methods for producing a maize plant containing in its genetic material one or more transgenes and to the transgenic maize plants produced by that method. This invention further relates to methods for producing maize lines derived from hybrid maize line 33T17 and to the maize lines derived by the use of those methods. This hybrid maize plant is characterized by exceptional yield and the ability to produce high quality white food grade grain with high test weight.]

--According to the invention, there is provided a hybrid maize plant, designated as 33T17, produced by crossing two Pioneer Hi-Bred International, Inc. proprietary inbred maize lines GE515488 and GE534625. These lines, deposited with the American Type Culture Collection, (ATCC), Manassas, Virginia 20110, have accession number PTA-1304 for GE515488 and accession number PTA-4289 for GE534625. This invention thus relates to the hybrid seed 33T17, the hybrid plant produced from the seed, and variants, mutants and trivial modifications of hybrid 33T17. This invention also relates to methods for producing a maize plant containing in its genetic material one or more transgenes and to the transgenic maize plants produced by that method. This invention further relates to methods for producing maize lines derived from hybrid maize line 33T17 and to the maize lines derived by the use of those

methods. This hybrid maize plant is characterized by yield stability at low to moderate yield environments and a light green color phenotype.--

Please replace the paragraph at page 40, beginning at line 2 with the following:

[A deposit of the seed of hybrid 33T17 is and has been maintained by Pioneer Hi-Bred International, Inc., 800 Capital Square, 400 Locust Street, Des Moines, Iowa 50309-2340, since prior to the filing date of this application. Access to this deposit will be available during the pendency of the application to the Commissioner of Patents and Trademarks and person determined by the Commissioner to be entitled thereto upon request. Upon allowance of any claims in the application, the Applicant(s) will make available to the public without restriction a deposit of at least 2500 seeds of hybrid 33T17 with the American Type Culture Collection (ATCC), Manassas, Virginia 20110. The seeds deposited with the ATCC will be taken from the same deposit maintained at Pioneer Hi-Bred and described above. Additionally, Applicant(s) will meet all the requirements of 37 C.F.R. § 1.801 - 1.809, including providing an indication of the viability of the sample when the deposit is made. This deposit of Hybrid Maize Line 33T17 will be maintained without restriction in the ATCC Depository, which is a public depository, for a period of 30 years, or 5 years after the most recent request, or for the enforceable life of the patent, whichever is longer, and will be replaced if it ever becomes nonviable during that period.]

--Applicant has made a deposit of at least 2500 seeds of Hybrid Maize Plant 33T17, GE515488, and GE534625 with the American Type Culture Collection (ATCC), Manassas, Va. 20110 USA, ATCC Deposit No. PTA-4274, 1304, 4289 respectively. The seeds deposited with the ATCC on May 3, 2002 (33T17) February 4, 2000 GE515488 and May 6, 2002 (GE524635) were taken from the deposit maintained by Pioneer Hi-Bred International, Inc., 800 Capital Square, 400 Locust Street, Des Moines, Iowa 50309-2340, since prior to the filing date of this application. Access to this deposit will be available during the pendency of the application to the Commissioner of Patents and Trademarks and persons determined by the Commissioner to be entitled thereto upon request. Upon allowance of any claims in the application, the Applicant(s) will make available to the public without restriction a deposit of at least 2500 seeds of 33T17, GE515488, and GE534625 with the American Type Culture Collection (ATCC), 10801 University Boulevard, Manassas, VA 20110-2209. The seeds deposited with the ATCC will be

taken from the same deposit maintained at Pioneer Hi-Bred and described above. Additionally, Applicant(s) will meet all the requirements of 37 C.F.R. §1.801 - 1.809, including providing an indication of the viability of the sample when the deposit is made. This deposit of Maize plant 33T17 and lines GE515488 and GE534625 will be maintained in the ATCC Depository, which is a public depository, for a period of 30 years, or 5 years after the most recent request, or for the enforceable life of the patent, whichever is longer, and will be replaced if it ever becomes nonviable during that period. Applicant will impose no restrictions on the availability of the deposited material from the ATCC; however, Applicant has no authority to waive any restrictions imposed by law on the transfer of biological material or its transportation in commerce. Applicant does not waive any infringement of its rights granted under this patent or under the Plant Variety Protection Act (7 USC 2321 et seq.).--

In the Claims

Please amend claims 1, 5, and 7 as follows:

1. (Amended)

Hybrid maize seed designated 33T17, representative seed of said hybrid 33T17 having been deposited under ATCC accession number [_____] PTA-4274.

5. (Amended)

A tissue culture of regenerable cells of a hybrid maize plant 33T17, representative seed of said hybrid maize plant 33T17 having been deposited under ATCC accession number [_____] PTA-4274, wherein the tissue regenerates plants capable of expressing all the morphological and physiological characteristics of said hybrid maize plant 33T17.

7. (Amended)

A maize plant, or its parts, regenerated from the tissue culture of claim 5 and capable of expressing all the morphological and physiological characteristics of hybrid maize plant 33T17, representative seed having been deposited under ATCC accession number PTA-4274.